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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,805	12/19/2001	Xianbin Wang	28940-00116USPT	3089

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Lisa K. Jorgenson, Esq.
STMicroelectronics, Inc.
1310 Electronics Drive
Carrollton, TX 75006-5039

EXAMINER

YANG, LINA

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,805

Applicant(s)

WANG, XIANBIN

Examiner

Lina Yang

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 9/21/2005 have been entered and made of record.
2. Applicant's amendment respect to claims 1-46 and the declaration pursuant to 37 C. F. R. 1.131 have been considered but are moot in view of the new ground(s) of rejection.
3. Claims 1-46 are unchanged and remaining pending.

Claim Objections

4. Claims 5 and 20 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 5 recites the limitation "total available upstream (downstream) bandwidth". Claim 5 depends on claim 1. Claim 1 recites the limitation "required upstream (downstream) bit rate". It is known in the art that the transmission bandwidth is a shared resource. Thus, the required upstream/downstream bandwidth corresponding to the required upstream/downstream bit rate can not be more than the total available upstream/downstream bandwidth. The extreme situation is they are equal. Therefore, Claim 5 failed to further limit claim 1.

Claim 20 is objected for the same reason set for claim 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8, 23 and 39 are rejected under 35 U.S.C. 112, second paragraph.

Claim 8 provides for the use of claims 6 and 7, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 8 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 23 and 39 are rejected for the same reason as claim 8.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351 (a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 13, 16 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Lu et al. (U. S. Patent No. 6,351,487 B1).

Regarding claim 1, Lu teaches a method for adapting a digital subscriber line (DSL) communications duplexing ratio to meet user application needs, comprising the steps of:

determining, for a new DSL loop communication (a new connection), a required upstream bit rate and a required downstream bit rate for the user application (col. 4 lines 12-31 and col. 19 lines 22-50);

dividing the required upstream bit rate by the required downstream bit rate to obtain a desired duplexing ratio for the new DSL communication (in Lu, the duplex ratio is defined as downstream to upstream; it serves the same purpose as for upstream to downstream in the current application) (col. 4 lines 12-31 and col. 21 lines 33-67 and col. 22 lines 1-2); and

adapting a duplexing ratio implemented by a DSL modem in support of the new DSL loop communication to at least approximate the desired duplexing ratio (col. 4 lines 12-31 and col. 21 lines 33-67 and col. 22 lines 1-2).

Claim 16 is an apparatus claim of method claim 1, therefore, it is rejected for the same reason as for claim 1.

Regarding claim 13, Lu further teaches that teaches that the DSL modem is selectively configurable to implement any one of a plurality of discrete duplexing ratios, the step of adapting further comprising the step of selecting a certain one of the discrete duplexing ratios that most closely meets the desired duplexing ratio (col. 20 lines 42-57).

Claim 28 is an apparatus claim of method claim 13, therefore, it is rejected for the same reason as for claim 13.

7. Claim 31 is rejected under 35 U.S.C. 102(e) as being anticipated by Cole (WO 00/52894).

Regarding claim 31, Cole teaches a digital subscriber line (DSL) transceiver (shown in fig. 2) connected to a certain loop in a cable bundle, comprising:

an idle cell removal machine (receive block 110 in fig. 2) that is operable to determine for a new DSL loop communication on the certain loop a required upstream bit rate and a required downstream bit rate for a user application, the required upstream bit rate being divided by the required downstream bit rate to obtain a desired duplexing ratio for the new DSL communication (operates in combination with the usage monitoring unit 170; page 4 lines 37-41; page 5 lines 1-41 and page 6 lines 1-2);

a duplexing controller (block 170 in fig. 2) operable to adapt a duplexing ratio implemented in support of the new DSL loop communication to at least approximate the desired duplexing ratio (operates in combination with the receive block 110; page 4 lines 37-41; page 5 lines 1-41 and page 6 lines 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Lu et al. (U. S. Patent No. 6,351,487 B1) in view of Widrow (U. S. Patent Application Publication No. US 20020032004 A1).

Regarding claims 2-3 and 17-18, Lu differs from the claimed invention in that Reddy does not specifically teach that the step of adapting the duplexing ratio comprises the step of adjusting analog/digital filters to alter an upstream and downstream bandwidth used by the modem for the new DSL loop communication. However, it's well known in the art that a filter is used for adjusting the upstream and downstream bandwidths, for example, Widrow teaches that an adaptive filter is used to attenuate the bandwidth (fig. 2 A; and [0040]). It's obvious to one having ordinary skill in the art to see the adaptive would be an analog filter for an analog signal, and a digital filter for a digital signal. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the step of adjusting analog/digital filters to alter an upstream and downstream bandwidth used by the modem for the new DSL loop communication, as taught by Widrow in the assembly of Lu in order to achieve the desired bandwidth, and therefore, the desired ratio.

9. Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Lu et al. (U. S. Patent No. 6,351,487 B1) in view of Cole (WO 00/52894).

Regarding claims 4 and 9, Lu differs from the claimed invention in that Lu does not specifically teach that Lu does not specifically teach the step of removing unnecessary idle ATM cells, and the required upstream/downstream bit rate for the new DSL loop communication is a bit rate needed for the new DSL loop communication without inclusion of unnecessary idle ATM cells. However, Cole teaches the step of

removing unnecessary idle ATM cells, and the required upstream/downstream bit rate for the new DSL loop communication is a bit rate needed for the new DSL loop communication without inclusion of unnecessary idle ATM cells (page 5 lines 1-4). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the step of removing unnecessary idle ATM cells, and the required upstream/downstream bit rate for the new DSL loop communication is a bit rate needed for the new DSL loop communication without inclusion of unnecessary idle ATM cells, as taught by Cole in the assembly of Lu in order to get the data flows on the actual data.

10. Claim 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Cole (WO 00/52894).

Regarding claim 36, Cole differs from the claimed invention in that Cole does not specifically teach that the implemented duplexing ratio defines a total available upstream bandwidth and a total available downstream bandwidth for the new DSL loop communication on a certain DSL loop. However, it is known in the art that the transmission bandwidth is a shared resource. Thus, the required upstream/downstream bandwidth corresponding to the required upstream/downstream bit rate can not be more than the total available upstream/downstream bandwidth. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the implemented duplexing ratio defines a total available upstream bandwidth

and a total available downstream bandwidth for the new DSL loop communication on a certain DSL loop, in order to efficient use the available resource.

11. Claims 14 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Lu et al. (U. S. Patent No. 6,351,487 B1) in view of Shimura et al. (U. S. Patent Application Publication No. 20020041656).

Regarding claims 14 and 29, Lu differs from the claimed invention in that Lu does not specifically teach monitoring noise on subcarriers used to implement the duplexing ratio for the new DSL loop communication testing if the monitored noise exceeds a threshold on any of the subcarriers; and if so, abandoning the subcarrier. However, Shimura teaches a method to measure the noise level and compare with a template to threshold to determine whether or not the channel (or subchannel) is qualified or not ([0021]). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include testing if the monitored noise exceeds a threshold on any of the subcarriers; and if so, abandoning the subcarrier, as taught by Shimura in the assembly of Lu in order to maintain the good performance.

12. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Lu et al. (U. S. Patent No. 6,351,487 B1) in view of Bullman (U. S. Patent No. 6,754,186)

Regarding claims 15 and 30, Lu differs from the claimed invention in that Lu does not specifically teach canceling echoes when upstream and downstream are overlapped in the adapted duplexing ratio. However, Bullman teaches that if echo cancellation is supported at both the Central Office and the client, then the DMT system can operate in an overlapped spectrum mode where tones are used for both upstream and downstream transmissions (col.1 lines 36-39). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include canceling echoes when upstream and downstream are overlapped in the adapted duplexing ratio, as taught by Bullman in the assembly of Lu in order to let the method operate when upstream and downstream are overlapped.

13. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Cole (WO 00/52894) in view of Lu et al. (U. S. Patent No. 6,351,487 B1).

Regarding claim 32, Cole differs from the claimed invention in that Cole does not specifically teach that the duplexing controller implements any one of a plurality of discrete duplexing ratios, the duplexing controller being further operable to select a certain one of the discrete duplexing ratios that most closely meets the desired duplexing ratio. However, Lu teaches that teaches that the DSL modem is selectively configurable to implement any one of a plurality of discrete duplexing ratios, the step of adapting further comprising the step of selecting a certain one of the discrete duplexing ratios that most closely meets the desired duplexing ratio (col. 20 lines 42-57).

14. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Cole (WO 00/52894) in view of Widrow (U. S. Patent Application Publication No. US 20020032004 A1).

Regarding claims 33 and 34, Cole differs from the claimed invention in that Cole does not specifically teach that the step of adapting the duplexing ratio comprises the step of adjusting analog/digital filters to alter an upstream and downstream bandwidth used by the modem for the new DSL loop communication. However, it's well known in the art that a filter is used for adjusting the upstream and downstream bandwidths, for example, Widrow teaches that an adaptive filter is used to attenuate the bandwidth (fig. 2 A; and [0040]). It's obvious to one having ordinary skill in the art to see the adaptive would be an analog filter for an analog signal, and a digital filter for a digital signal. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the step of adjusting analog/digital filters to alter an upstream and downstream bandwidth used by the modem for the new DSL loop communication, as taught by Widrow in the assembly of Cole in order to achieve the desired bandwidth, and therefore, the desired ratio.

Art Unit: 2665

15. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Cole (WO 00/52894) in view of Shimura et al. (U. S. Patent Application Publication No. 20020041656).

Regarding claim 44, Cole differs from the claimed invention in that Cole does not specifically teach monitoring noise on subcarriers used to implement the duplexing ratio for the new DSL loop communication testing if the monitored noise exceeds a threshold on any of the subcarriers; and if so, abandoning the subcarrier. However, Shimura teaches a method to measure the noise level and compare with a template to threshold to determine whether or not the channel (or subchannel) is qualified or not ([0021]). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include testing if the monitored noise exceeds a threshold on any of the subcarriers; and if so, abandoning the subcarrier, as taught by Shimura in the assembly of Cole in order to maintain the good performance.

16. Claim 45, 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Cole (WO 00/52894) in view of Bullman (U. S. Patent No. 6,754,186)

Regarding claim 45, Cole differs from the claimed invention in that Cole does not specifically teach canceling echoes when upstream and downstream are overlapped in the adapted duplexing ratio. However, Bullman teaches that if echo cancellation is supported at both the Central Office and the client, then the DMT system can operate in an overlapped spectrum mode where tones are used for both upstream and

Art Unit: 2665

downstream transmissions (col.1 lines 36-39). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include canceling echoes when upstream and downstream are overlapped in the adapted duplexing ratio, as taught by Bullman in the assembly of Cole in order to let the method operate when upstream and downstream are overlapped.

Regarding claim 46, the modified assembly of Cole and Bullman further teaches that the echo canceller is designed to operate at a maximum overlapping bandwidth between the upstream and the downstream (by default, the echo canceller will work on the maximum overlapping as long as separating upstream and downstream signals can be achieved).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claim 6-12, 21-27 and 35, 37-38 and 40-43 are rejected for nonstatutory double patenting with copending Application No. 10029190 (PG-PUB US 20030112858).

Claim 6 along with the parent claims 1 and 5 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7 and 8 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 7 along with the parent claims 1 and 5 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7 and 8 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 8 along with the parent claims 1 and 5 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double

Art Unit: 2665

patenting as being unpatentable over claims 1, 7 and 8 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 9 along with the parent claims 1, 5 and 8 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 6 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 10 along with the parent claims 1, 5 and 8 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 10 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 11 along with the parent claims 1, 5 and 8 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 11 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 12 along with the parent claims 1, 5 and 8 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 12 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 21 along with the parent claims 16, 19 and 20 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 and 19 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

Art Unit: 2665

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 22 along with the parent claims 16, 19 and 20 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13, 19 and 20 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 24 along with the parent claims 16, 20 and 23 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 and 18-20 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 25 along with the parent claims 16, 20 and 23 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double

Art Unit: 2665

patenting as being unpatentable over claims 13 and 18-22 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 26 along with the parent claims 16, 20 and 23 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 and 23 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 27 along with the parent claims 16, 20 and 23 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 and 24 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 35 along with the parent claim 31 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25 and 31 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 37 along with the parent claims 31 and 36 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25 and 29 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 38 along with the parent claims 31 and 36 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25 and 30 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 40 along with the parent claims 31, 36 and 39 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 and 18-20 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 41 along with the parent claims 31, 36 and 39 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25 and 32 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 42 along with the parent claims 31, 36 and 39 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double

patenting as being unpatentable over claims 25 and 33 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim 43 along with the parent claims 31, 36 and 39 of current application is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25 and 34 of copending Application No. 10029190 (PG-PUB US 20030112858). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

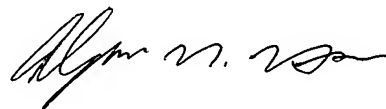
Art Unit: 2665

~~22~~.19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571) 272-3151. The examiner can normally be reached Monday through Wednesday between 7:00 a.m. and 8:00 p.m. eastern standard time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LY



ALPUS H. HSU
PRIMARY EXAMINER